

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in this application.

LISTING OF CLAIMS:

1. (Currently Amended) A guide wire comprising:
a first wire disposed on the distal side of said guide wire; and
a second wire disposed on the proximal side from said first wire;
wherein said first wire and said second wire are joined to each other by
welding; and
a welded portion formed by the welding has a projection projecting in the
outer peripheral direction;
a cover layer is disposed over said projection;
said first wire and said second wire are not helical coils; and
material forming at least one of the proximal end of the first wire and the distal
end of the second wire constitutes at least a part of the projection.
2. (Canceled)
3. (Original) A guide wire according to claim 1, wherein said projection is
visible under fluoroscopy.
4. (Original) A guide wire according to claim 1, further comprising a spiral
coil covering at least a distal end portion of said first wire.

5. (Original) A guide wire according to claim 4, wherein the proximal end of said coil abuts on said projection.

6. (Original) A guide wire according to claim 1, wherein the proximal side and the distal side of said projection are formed into shapes asymmetric to each other with respect to the welded surface of said welded portion.

7. (Original) A guide wire according to claim 1, wherein the vicinity of said welded portion between said first wire and said second wire, has a thinned portion, and said projection is provided on said thinned portion.

8. (Currently Amended) A guide wire comprising:
a first wire disposed on the distal side of said guide wire; ~~and~~
a second wire disposed on the proximal side from said first wire, said second wire having rigidity higher than that of said first wire;

wherein said first wire and said second wire are joined to each other by welding;

a welded portion formed by the welding has a projection projecting in the outer peripheral direction;

a cover layer is disposed over said projection;

said first wire and said second wire are not helical coils;

material forming at least one of the proximal end of the first wire and the distal end of the second wire constitutes at least a part of the projection;

said second wire has a first portion provided in the vicinity of the distal end of said second wire and a second portion provided on the proximal side from said first portion; and

said first portion has rigidity lower than that of said second portion.

9. (Canceled)

10. (Original) A guide wire according to claim 8, wherein said projection is visible under fluoroscopy.

11. (Original) A guide wire according to claim 8, further comprising a spiral coil covering at least a distal end portion of said first wire.

12. (Original) A guide wire according to claim 11, wherein the proximal end of said coil abuts on said projection.

13. (Original) A guide wire according to claim 8, wherein the proximal side and the distal side of said projection are formed into shapes asymmetric to each other with respect to the welded surface of said welded portion.

14. (Original) A guide wire according to claim 8, wherein the vicinity of said welded portion between said first wire and said second wire has a thinned portion, and said projection is provided on said thinned portion.

15. (Currently Amended) A guide wire comprising:

a first wire being formed of a pseudo-elastic alloy and disposed on the distal side of said guide wire; and

a second wire being formed of a Co-based alloy and disposed on the proximal side from said first wire;

a spiral coil covering at least a distal end portion of said first wire;

wherein said first wire and said second wire are joined to each other by welding at a welded portion;

the welded portion forming a projection that projects in an outer peripheral direction;

a cover layer is disposed over said projection; and

material forming at least one of the proximal end of the first wire and the distal end of the second wire constituting at least a part of the projection.

16. (New) A guide wire according to Claim 1, wherein the projection extends on both axial sides of the welded portion.

17. (New) A guide wire according to Claim 15, wherein the projection extends on both axial sides of the welded portion.

18. (New) A method for operating a guide wire comprising:

inserting into a lumen of a body a guide wire which comprises a first wire disposed on a distal side of said guide wire and a second wire disposed on a

proximal side from said first wire, with said first and second wires being joined to each other by welding at a welded portion forming a projection that projects outwardly in an outer peripheral direction;

moving the guide wire along the lumen of the body toward a target portion;
and

visualizing the position of the projection of the guide wire in the lumen of the body under fluoroscopy.

19. (New) A guide wire comprising:

a first wire disposed on a distal side of said guide wire;

a second wire disposed on a proximal side from said first wire;

said first wire and said second wire are not helical coils;

said first wire and said second wire being joined to each other by welding at a welded portion;

the welded portion forming a projection on the guide wire that projects in an outer peripheral direction;

the first wire comprising a reduced outer dimension portion possessing an outer dimension smaller than the outer dimension of the projection and smaller than the outer dimension of a distally located portion of the first wire, the reduced outer dimension portion of the first wire being positioned between the projection and the distally located portion of the first wire;

the second wire comprising a reduced outer dimension portion possessing an outer dimension smaller than the outer dimension of the projection and smaller than the outer dimension of a proximally located portion of the second wire, the reduced

outer dimension portion of the second wire being positioned between the projection and the proximally located portion of the second wire; and

material forming at least one of the proximal end of the first wire and the distal end of the second wire constituting at least a part of the projection.

20. (New) The guide wire according to Claim 19, wherein said projection possesses a maximum outer that is equal to or less than an outer diameter of the distally located portion of the first wire and the proximally located portion of the second wire.

21. (New) A method of making a guide wire comprising:

butting a connection end face at a proximal end of a first wire against a connection end face at a distal end of a second wire while applying voltage and a pressing force to weld together the first and second wires at a welded portion, the welded portion forming a projection that projects outwardly in an outer peripheral direction relative to portions of the first and second wire adjacent the projection;

adjusting an outer dimension of the projection at the welded portion so that upon completing adjusting the outer dimension of the projection the projection still projects outwardly in the outer peripheral direction relative to the portions of the first and second wire adjacent the projection.

22. (New) The method according to Claim 21, wherein the adjusting comprises reducing a height of the projection.

23. (New) The method according to Claim 21, wherein the adjusting comprises reducing a height of the projection to 0.001 mm - 0.3 mm.

24. (New) The method according to Claim 21, wherein said adjusting comprises grinding the projection.